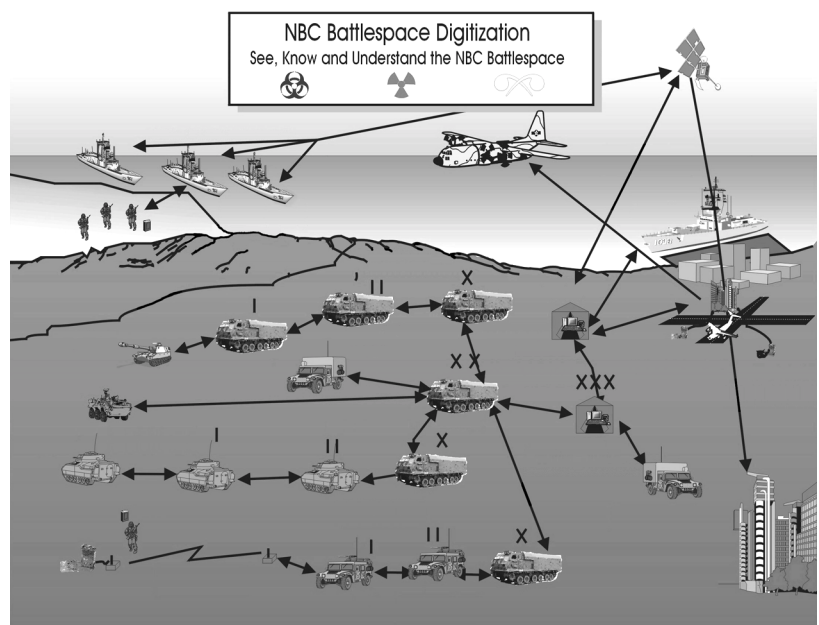# Joint Warning and Reporting Network (JWARN)

The Joint Warning and Reporting Network (JWARN) is a standardized software application intended to provide Nuclear, Biological, and Chemical (NBC) warning and reporting, downwind hazard prediction, operations planning, and NBC management capabilities for Joint Forces, from battalion to theater-level command. JWARN will be located in the NBC Cell of Command and Control Centers and employed by NBC specialists and other designated personnel. Its primary functions are to report and warn Commanders and personnel of NBC attacks; to perform analysis of NBC information and provide hazard predictions; to support planning and assessments of NBC defense; and to support sensor management including maintenance planning, configuration control, performance monitoring, and testing.

JWARN will be hosted on Joint and Service Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C^{4}ISR) systems utilizing the Defense Information Infrastructure Common Operating Environment (DII COE) common resources applications. JWARN C^{4}ISR host systems include: Global Command and Control System (GCCS), GCCS-Army, GCCS-Maritime, Intelligence Operations Server (IOS), the Theater Battle Management Core System (TBMCS), Maneuver Control System (MCS), Force XXI Battle Command, Brigade and Below (FBCB2), Advanced Field Artillery Tactical Data System (AFATDS), and Command and Control PC (C2PC). The JWARN will share information with Command and Control and other DoD databases providing information on friendly and enemy forces, terrain, weather, and others.

This system is intended to exchange information with legacy and new development NBC sensors, including the M8A1 Chemical Agent Alarm, M21 Remote Sensing Chemical Agent Automatic Alarm, M22 Automated Chemical Agent Detection Alarm, Integrated Point Detection System, Radiac AN/VDR-2, Radiac ADM-300A, and the following systems currently in development: Joint Biological Point Detection System, Joint Services Lightweight Standoff Chemical Agent Detector, Joint Chemical Agent Detector, NBC Reconnaissance System, and Joint Services Light NBC Reconnaissance Vehicle. The JWARN Component Interface Device (JCID) will allow the exchange of information between the NBC sensors and the JWARN application hosted on the C^{4}ISR systems via Service specific C^{4}ISR communications architecture (radio, wire, etc).

JWARN is being developed in three Blocks. Block I is stand-alone NBC analysis software that is already fielded. Block II is mission software only and will be hosted on the higher echelon command and control systems, GCCS, GCCS-M, GCCS-A, TBMCS, and IOS. Block III will be hosted on these C^{4}ISR platforms plus C2PC, MCS, FBCB2, and AFATDS. Block III will be linked to the NBC sensors via JCID interface for remote monitoring and control. This Block will also be linked to the Joint Effects Model (JEM), which will provide advanced hazard prediction and modeling and simulation for use by JWARN.

The Embedded Common Technical Architecture (ECTA) program is a related effort to provide warning and reporting of NBC hazards to U.S. Forces. Unlike JWARN Block II, it is intended to link tactical sensors to Service unique command and control systems such as the Army's FBCB2, and it will integrate with the Navy's GCCS-M command and control system. ECTA is managed by the Army.

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TEST & EVALUATION ACTIVITY

The Test and Evaluation Master Plan (TEMP) has been undergoing revisions for the past year due to its re-baselined schedule and evolutionary blocking strategy for the program.

TEST & EVALUATION ASSESSMENT

Since the program was placed on oversight, DOT&E has worked closely with the Marine Corps Systems Command to address the inadequacies of the draft TEMPs.

JWARN must integrate with many joint C^4ISR systems and NBC sensors. A significant degree of planning is necessary to ensure co-development of JWARN with the Service command and control hosts. There has been a tendency to view the performance of JWARN in isolation– first from the NBC sensors, and, second from the host C^4ISR systems. It will be a challenge to conduct operational testing within the context of the total system of sensors, and C^4ISR systems. The TEMP must address strategies to co-develop JWARN on the command and control hosts and it must plan for a system-of-systems Initial Operational Test and Evaluation with JWARN, the GCCS host, sensors, and JEM.

DOT&E is also involved with a separate review of the ECTA Test and Evaluation strategy, which must also demonstrate its integration strategy with GCCS-M, FBCB2, and a system-of-systems Initial Operational Test and Evaluation prior to fielding.